PATENT COOPERATION TREATY





PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 020277WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)							
International application No. PCT/EP2003/008905	International filing date (day/n 11 August 2003 (11.0)							
International Patent Classification (IPC) or national classification and IPC B29B 17/00								
Applicant CARCOUSTICS TECH CENTER GMBH								
 This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. This REPORT consists of a total of 5 sheets, including this cover sheet. This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been 								
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of 4 sheets.								
3. This report contains indications relating to the following items: I Basis of the report II Priority III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV Lack of unity of invention V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI Certain documents cited VII Certain defects in the international application VIII Certain observations on the international application								
Date of submission of the demand 14 February 2004 (14.02.2004)		Date of completion of this report 05 January 2005 (05.01.2005)						
Name and mailing address of the IPEA/EP		Authorized officer						
Facsimile No.	Teleph	hone No.						

Form PCT/IPEA/409 (cover sheet) (July 1998)

Translation

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP2003/008905

I. Basis of the report									
1. With regard to the elements of the international application:*									
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ightarrow	₹ t	he desc	ription:						
_	 P	ages	3-6	, as originally filed					
i	p	ages		, filed with the demand					
	p	ages	1, 1a, 2 , filed with the letter of	25 August 2004 (25.08.2004)					
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l L		oages	6-13	, as originally filed					
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l L	the	e seque	nce listing part of the description:						
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2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language which is: the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3). 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing: contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.									
4. [the description, pages the claims, Nos the drawings, sheets/fig nort has been established as if (some of) the amendments had not been made, si	nce they have been considered to go					
iı	5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** * Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).								
** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.									

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Internal application No.
PCT/EP 03/08905

NO

v.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
1.	Statement						
	Novelty (N)	Claims	1-13	YES			
		Claims		NO			
	Inventive step (IS)	Claims	1-13	YES			
	• • •	Claims		NO			
	Industrial applicability (IA)	Claims	1-13	YES			

2. Citations and explanations

Reference is made to the following document:

Claims

D1: US-A-5 422 385 (FARKAS PAUL V) 6 June 1995 (1995-06-06)

Novelty

Document D1 is considered the prior art closest to the subject matter of claims 1 and 7 and discloses (the references between parentheses refer to that document):

Sound-insulating material produced from rubber (12) that is mixed with PUR plastic (13), the rubber forming a matrix in which a number of gas-filled hollow bodies (14) are embedded.

The subject matter of claim 1 thus differs from the known material in that the rubber (12) is formed from thermoplastic rubber particles.

Document D1, which is regarded as the closest prior art, also discloses a method, from which the subject matter of claim 7 differs in that thermoplastic

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rubber particles and PUR plastic particles are extruded with the addition of a blowing agent to form a foam-like mixed material, the blowing agent being added in the form of hollow micro-bodies which contain a blowing agent, have a mixed polymer shell and expand when heated.

The subject matter of claims 1 and 7 is thus novel (PCT Article 33(2)).

Inventive step

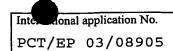
The present invention can therefore be considered to address the problem of being able to produce sound-insulating material by extrusion without losing as a result of the extrusion pressure the hollow spaces that are essential to the sound-insulating effect.

The solution to this problem proposed in claims 1 and 7 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons:

The prior art discloses methods in which soundinsulating shaped bodies are produced using
isocyanate-based matrix materials. A disadvantage
of this material is that it cannot be shaped further
following hardening, since it does not have
thermoplastic properties. It is difficult to use
thermoplastic materials, since the high pressure
used during the process makes it difficult to
produce the hollow spaces required.

The solution to this problem is defined in claims 1 and 7, which use thermoplastic rubber and hollow





bodies filled with gas. The pressure in the hollow bodies increases with the processing temperature during extrusion, the extrusion pressure encountering resistance.

Claims 2 to 6 and 8 to 13 are dependent on claims 1 and 7, respectively, and therefore likewise meet the PCT requirements for novelty and inventive step.

Industrial applicability

The subject matter of the claims is industrially applicable and therefore meets the requirements of PCT Article 33(4).